

**United States Environmental Protection Agency
EPA New England
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July 14, 2003

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Public Information Repositories

RE: June 2003 Monthly Report
1.5 Mile Reach Removal Action
GE-Pittsfield/Housatonic River Site

Enclosed please find the June 2003 Monthly Report for the 1.5 Mile Reach Removal Action. In accordance with the Consent Decree for the GE-Pittsfield/Housatonic River Site, the United States Environmental Protection Agency (EPA) is performing the 1.5 Mile Reach Removal Action, with General Electric funding a portion of the project through a cost sharing formula.

The EPA has entered into an agreement with the United States Army Corps of Engineers (USACE) to assist in the design and construction of the Removal Action. The USACE subsequently awarded a design-construct contract to Weston Solutions, Inc. (Weston). Weston, with several subcontractors, will be performing the design and construction activities for the 1.5 Mile Reach Removal Action.

If you have any questions, please contact me at (413) 236-0969.

Sincerely,

Dean Tagliaferro
1.5 Mile Reach Removal Action Project Manager

1. Overview

During June 2003, EPA, the United States Army Corps of Engineers (USACE), the USACE's contractor, Weston Solutions, Inc. and Weston's subcontractors continued remediation activities on the 1.5 Mile Reach Removal Action. The primary work included soil and sediment excavation activities in Cells 11A and 12A and the backfilling of the riverbanks and riverbed in Cell 11A. Installation of the permanent sheetpile retaining wall in Cell 11A was completed. Installation of cellular geoweb in Cell 11A was completed as well as tree and shrub planting in Cells 10, 10A, 11 and 11A. Also, black willows and eastern cottonwoods were planted in Cells 2, 3, 4, 5, 6, 6A, 7, 7A, 9, 11, and 12. In addition, a transfer of TSCA and non-TSCA materials from the stockpile management areas to the GE On Plant Consolidation Areas (OPCAs) was performed.

2. Chronological description of tasks performed

Refer to Figure 1 for an orientation of the sheetpile cells and their respective locations.

By the end of May 2003, Cell 11A excavation activities were initiated. During the first week of June, the TSCA, non-TSCA and NAPL material excavation activities in Cell 11A riverbed and riverbank continued. The excavated TSCA materials were loaded into a skip bucket and transferred into the temporary TSCA holding cell on the Cell 12A riverbank. The material was then transported to the Building 63 stockpile management area. The non-TSCA materials within Cell 11A were loaded into a skip bucket and transferred into the temporary non-TSCA holding cell on the Cell 12A riverbank. This material was transported to the Building 65 stockpile management area. Five truckloads of NAPL-impacted materials were removed and transported to a designated stockpile management area in Building 68. (See Table 1 for a daily summary of material transported to the stockpile management areas in the month of June). Areas of the riverbank where excavation activities took place in Cell 11A were covered daily with polyethylene sheeting as a short-term erosion control measure.

The NAPL impacted material extended into the riverbank. Due to the steepness of the riverbank and the presence of a commercial operation on the top of the riverbank, further excavation into the riverbank was not feasible without significantly impacting the stability of the riverbank and the commercial operation. Therefore a decision was made to contain the remaining NAPL-impacted riverbank material with an impermeable containment system. Due to the steep slopes of the riverbank in this area, a permanent retaining wall was already required for long-term riverbank stability. This permanent sheetpile retaining wall was modified to include the impermeable containment system. The necessary modifications included installing angle iron over each interlock to seal the seam between sheets and to minimize the potential for NAPL to permeate through the wall to the restored riverbed. The angle iron would subsequently be filled with palletized bentonite. An upstream wing wall was added to the proposed containment wall

to isolate the NAPL-impacted material. This impermeable containment wall extended from the upstream end of Cell 11A and terminated at the border of Parcels I8-23-6 and I8-23-4.

During the first week of June the installation of the impermeable sheetpile retaining wall was completed. To allow for the installation of the angle iron over the interlocks, material was temporarily excavated along the riverside of the wall down to the fine silt layer. The NAPL impacted material was only found above the fine silt layer. Each angle iron assembly was then welded to the sheetpile wall.

Also, during the first week of June the assembly and installation of a 54-inch Gravity Bypass Pipe was initiated. Two 1400 foot sections of 54-inch pipe are scheduled to be installed as part of the gravity bypass system. The pipe will be connected to the temporary dam, which will be located approximately 770 feet upstream of the Elm Street Bridge. This system will be used during Phase II removal action activities beginning 330 feet upstream of the Elm Street Bridge and ending at the Dawes Avenue Bridge. To allow access to the river for the installation of the 54-inch pipe, trees and shrubs were cleared on the west riverbank, south of the staging area on Parcel I8-24-1. In addition, a "skid plate" was constructed to enable the pipe to slide into the river as the pipe assembly process proceeded. The 54-inch pipe segments were connected together by fusion welding. As additional pieces were welded together a bulldozer situated in the riverbed was used to pull the pipe into the river channel. Prior to driving the bulldozer into river channel a silt curtain was placed in the river to minimize disturbed sediment from moving downstream. As part of a temporary restraint system, two H-piles were driven into the ground at a location where the pipe was descending into the river. The pipe was tied to each of the piles with nylon straps and cable chokers. Additionally, the in-river portion of the pipe was tied off to the base of stable trees located on the adjacent riverbank in a similar fashion.

Other activities during the first week of June included tree and shrub planting in Cells 10, 10A, and 11. Watering activities were continued in all the re-vegetated areas. Upon completion of planting activities in Cell 10 and 10A a final verification survey of the cells was completed. Lastly, handrails were installed at the top of the Silver Lake Outfall box culverts in Cell 5A and additional 18-inch riprap was placed on the riverbank to fill in to the edge of the temporary access road.

During the second week of June, the TSCA, non-TSCA and NAPL material excavation activities in Cell 11A riverbed and riverbank were completed and all materials were transported to the appropriate stockpile management areas (see Table 2 for final excavation quantities). NAPL impacted soils were encountered at and below the design excavation elevation in Cell 11A. Therefore, to allow for the removal of this material on the riverside of the permanent sheetpile retaining wall, excavation activities were completed in 10 to 15 foot increments working from the upstream end of the cell down to minimize the potential for failure of the wall. No residual NAPL-impacted sediment was observed following the completion the NAPL excavation. As the 10 to 15 foot over-excavated areas were completed these areas were backfilled with common fill and filter stone material to stabilize the permanent sheetpile retaining wall. Two-inch diameter weep holes were installed every 10 feet in the permanent sheetpile retaining wall. In order to minimize the potential for the NAPL encountered on the riverbank side of the permanent sheetpile retaining wall to permeate through the weep holes installed in the wall, a bentonite-sand mixture was placed behind the wall up to within one foot of the weep hole elevations.

Subsequently, a geotextile wrapped 2-inch stone drain system was installed above the bentonite-sand mixture to facilitate drainage of groundwater from behind the wall. Lastly, the angle iron welded over the wall interlocks were filled with palletized bentonite to complete the installation of the permanent sheetpile retaining wall and prevent the migration of NAPL through the sheetpile interlocks. The Cell 11A post-excavation verification survey was completed and approved.

Upon approval of the post-excavation verification survey backfill activities were initiated in Cell 11A. The riverbed was backfilled with a six-inch layer of Common Fill Filter Grade material and a six-inch layer of Filter Stone and compacted as necessary. Nine-inch riprap was then placed on top of the filter stone. In the area of the riprap wedge scheduled to be installed in front of the permanent sheetpile retaining wall, twelve-inch riprap was placed on top of the filter stone. In addition, the portion of the riverbank behind the permanent sheetpile retaining wall was backfilled with a six-inch layer of Common Fill Filter Grade material, a six-inch layer of Filter Stone, and twenty-four inches of 18-inch riprap up to elevation 976.

Other activities completed during the second week of June included applying herbicides to invasive plants along the newly restored riverbanks as well as areas outside of the limit of remediation. Moreover, the assembly and installation of the 54-inch pipe was completed. To minimize the potential for non-project related personnel from entering the site a fence was installed at the downstream end of the Elm Street Bridge over the pipe.

During the third week of June, backfill activities were completed in Cell 11A. The riverbank portion of the cell above elevation 976 was backfilled with a minimum thirty-inch layer of Common Fill Filter Grade (compacted in six inch lifts to a minimum of 95 percent of the maximum dry density) and a six-inch layer of perforated cellular geoweb filled with topsoil. The cellular geoweb was required because the proposed final slope of the riverbank is as steep as 1.5 horizontal to 1 vertical (1.5H:1V). Slopes steeper than 2H:1V require additional stabilization measures such as the installation of cellular geoweb. The cellular geoweb was secured into the riverbank with rebar, one stake per 3 square feet. The placement of herbaceous seed mix and biodegradable erosion control blankets was completed in Cell 11A. In addition, a storm water diversion swale was installed on the downstream end of Cell 11A consisting of geotextile and nine-inch riprap. The diversion swale was designed to handle the overland storm water flow generated from the paved portion of Parcel I8-23-6. The survey subcontractor completed the backfill verification survey of Cell 11 and the water from the cell was pumped directly to the river.

Other activities included the removal of the sheetpile cutoff wall between Cell 11 and Cell 11A. Also, black willows and eastern cottonwoods were planted in Cells 2, 3, 4, 5, 6, 6A, 7, 7A, 9, 11, and 12.

During the fourth week of June, the downstream cutoff wall of Cell 11A along with the upstream cutoff wall of Cell 11 were removed flooding these two cells opening the entire river to flow.

Cell 12A was isolated by installing the upstream and downstream cutoff walls. The dewatering of Cell 12A was started by pumping water greater than 6 inches in depth directly back to the river. Once the water depth reached 6 inches the water was pumped to the water treatment

system. Sumps and trenches were installed in the bottom of the cell to facilitate the dewatering process. The survey subcontractor completed locating the excavation depths and limits including the extent of TSCA and Non-TSCA cells within Cell 12A. TSCA and Non-TSCA excavation activities were initiated in Cell 12A and all materials were transported to the appropriate stockpile management areas.

Other activities completed during the fourth week of June included the removal of the temporary Non-TSCA and TSCA holding cells installed in the riverbank of Cell 12A and the centerline sheetpile upstream of Cell 12A except for the centerline sheetpile directly adjacent to the location of the temporary dam. Moreover, the survey subcontractor completed the layout of the excavation limits for the installation of the temporary dam as well as the survey layout of the temporary dam components. The construction of the dam was initiated. The center column of the dam was located and installed using the centerline sheeting and a guide template. In addition, the center support column, downstream of the center column, for the dam was located and installed. Centerline sheetpile was then installed upstream of the center column of the dam, between the center column and center support column, and downstream of the center support column.

During the month of June, the water treatment system treated water from Cells 11A and 12A. Due to the presence of NAPL in Cell 11A sampling of the water treatment system for parameters included in the NPDES exclusion permit was performed twice during the month of June, one sample was collected on June 12, 2003 and the other on June 25, 2003. Also, due to the presence of NAPL in Cell 11A, the analytical parameters for the water treatment system sampling continued to include volatiles, semi-volatiles and Total Petroleum Hydrocarbons. Air monitoring for particulate matter (PM10 sampling) and surface water turbidity monitoring was performed on a daily basis. The monthly PCB air-monitoring event was performed on June 26, 2003. Surface water sampling for total suspended solids (TSS) and PCBs was performed on June 5 and June 23, 2003. Sampling of Topsoil for chemical parameters was performed on June 18, 2003; sampling for Common Fill for chemical parameters was performed on June 30, 2003. An eight-point composite disposal characterization sample was collected from the Cell 11A NAPL-impacted sediment stockpile in Building 68 on June 18, 2003.

Geotechnical samples were collected for Common Fill, Filter Stone, and Topsoil. The results of the geotechnical testing are not included in the monthly reports but are contained in other submittals and are available upon request.

Stockpile management area activities continued throughout the month of June. Daily inspections, and operation and maintenance activities were performed within Buildings 63, 65 and 68. This included the collection of accumulated water that drained from the stockpiles and transportation of that water to the on-site water treatment system. Decontamination of equipment was conducted prior to moving it between TSCA and non-TSCA staging areas.

The transfer of TSCA materials from the Building 63 stockpile management area to the Building 71 OPCA was performed on June 11 and June 12, 2003. The transfer of non-TSCA materials from the Building 65 stockpile management area to the Hill 78 OPCA was performed on June 16 and June 17, 2003. Paint filter tests were collected at a frequency of 1 per 100 cubic yards (cy) of material loaded (see Table 3 for a summary of material transported to the OPCAs in June

2003 and Table 4 for a summary of material transported to the OPCAs for the project through June 2003).

Traffic control was conducted on Lyman Street throughout the month of June.

The vibration monitoring activities continued on Parcel I8-23-6. Since, most of the construction activities during the month of June took place in Cell 11A, which is adjacent to the self car wash structure both monitoring devices were set up to monitor the manual car wash structure (one unit on each opposite end of the building). (See Figure 1 for the locations of the Vibration Monitors).

The parking lot area in the southeast corner of Parcel I8-4-201 was repaved.

Also, all paved access roads, Lyman Street, and the Lyman Street parking lot were swept regularly by a street sweeper.

For the month of June a total of four truckloads (40 cy) of non-TSCA material were generated during the installation of the catch basin on Parcel I9-4-201 and minor clean up activities of the support areas.

Dust control procedures continued for access roads, parking areas, and material storage areas. In addition, staged backfill materials were covered to prevent the generation of dust.

3. Sampling/test results received

PCB sample results for the water treatment system sampling program were received for samples collected on June 12, 2003 and June 25, 2003 (Table 5). Non-PCB sample results were received for samples collected on May 28, 2003 and June 12, 2003 (Table 5a), non-PCB analytical results for the WTS samples collected on June 25, 2003 are not available yet. Analytical results for backfill materials are summarized in Table 6. This includes the sampling results for Common Fill Filter Grade samples collected on May 28, 2003. Results for the topsoil sample collected on June 18, 2003 and Common Fill samples collected on June 30, 2003 are not yet available. The results of the daily particulate air monitoring program are summarized in Table 7. Table 8 is a summary of daily turbidity monitoring results. Results for PCB and TSS samples and water column monitoring data collected on May 22, 2003 and June 5, 2003 are presented in Table 9. PCB and TSS results for water monitoring samples collected on June 23, 2003 are not yet available. A summary of samples collected for the air sampling conducted on May 30, 2003 and June 26, 2003 are provided in Table 10; however, the PCB data for samples collected on June 26, 2003 is not yet available. Table 11 contains PCB data associated with equipment confirmatory wipe samples. Table 12 presents the analytical data associated with Cell 11 NAPL-impacted sediment stockpile in Building 65 collected on May 28, and NAPL-impacted sediment sample collected in Cell 11A on May 30, 2003. Results for Cell 11A NAPL-impacted sediment stockpile in Building 68 collected on June 18, 2003 are not available yet.

4. Diagrams associated with the tasks performed

Figure 1 is a map of Phase I and the beginning of Phase II and includes layout of all excavation cells, temporary dam, lot parcel identification numbers, water monitoring locations, PCB air sampling locations, vibration monitoring locations, access road locations, fence line location, the water treatment system pad location, the effluent discharge location, and the utility trench location.

5. Reports received and prepared

Weston received a vibration monitoring summary report for the period of June 3, 2003 to June 30, 2003 from Geosonics, Inc. During this period, two seismographs were set up on Parcel I8-23-6. Since, most of the construction activities during the month of June were taking place in Cell 11A, which is adjacent to the self car wash structure both monitoring devices were set up to monitor the manual car wash structure (one unit on each opposite end of the building). Both of the units were set up to collect data on continuous seismic mode. Activities occurring near the two monitoring locations during this period included normal background activities, sheet pile driving, and general construction activities. The maximum ground vibration level measured was 2.08 inches per second (ips), this was a single time occurrence. It was concluded that a construction worker accidentally hitting the monitoring instrument most likely caused the disturbance. The next highest reading for the month (outside of the times when the unit was disturbed for maintenance) reached 0.92 ips. This level represents 46% of the state's recommended limit of 2.0 ips. All readings during this period except the 2.08 ips comply with State Regulations.

6. Photo documentation of activities performed

See attached photos.

7. Brief description of work to be performed in July 2003

- Complete excavation and backfill activities in Cell 12A.
- Install sheetpile walls (isolation cell) to isolate the temporary dam construction area on the west side of the river.
- Construct the temporary dam on the west side of the river.
- Remove all of the sheetpile walls in Phase I and the Extension Phase.
- Remove the temporary dam isolation cell on the west side of the river and install it on the east side.
- Began the construction of the temporary dam on the east side of the river.
- Transfer TSCA materials from Building 63 to the Building 71 OPCA.
- Transfer non-TSCA materials from Buildings 65 and 68 to the Hill 78 OPCA.
- Arrange for transport NAPL-impacted materials to an approved off-site disposal facility.
- Continue stockpile management activities at Buildings 63, 65 and 68.
- Continue operation of water treatment system.
- Continue daily air and turbidity monitoring.
- Continue PCB air sampling (once a month), water column sampling (twice a month), water treatment system sampling (monthly) and backfill material sampling (as needed).
- Continue vibration monitoring of two structures located on Parcel I8-23-6.

8. Attachments to this report

Table 1. Quantity of Bank and Sediment Material Generated During the Month of June

Table 2. Quantity of Bank and Sediment Material Excavated to Date

Table 3. Quantity of Material Transferred to OPCAs During the Month of June

Table 4. Quantity of Material Transferred to OPCAs to Date

Table 5. NPDES PCB Sampling Results for Water Treatment System

Table 6. Backfill Material Testing Results

Table 7. Daily Air Monitoring Results

Table 8. Daily Water Column Turbidity Monitoring Results

Table 9. Summary of Turbidity, PCB, and TSS Water Column Monitoring Results

Table 10. PCB Air Sampling Results

Table 11. Equipment Confirmatory Wipe Sample Results

Table 12. NAPL-Impacted Sediment from Cells 11 and 11A Testing Results

Figure 1- Phase I Site Plan

Photodocumentation